We claim:

1. A package sealing method comprising the following steps of:

interposing a bonding member between a case housing a product and a lid made of a material that transmits a laser beam; and

irradiating the bonding member with a laser beam through the lid so that the bonding member is melted to weld the case and the lid together with intervention of the bonding member.

2. The package sealing method according to claim 1, wherein the bonding member is formed on the case or the lid, preparatory to the step of interposing a bonding member.

3. The package sealing method according to any one of claim 1 or 2, wherein the case and the lid are fixed to each other by pressure, and thereafter, the bonding member is irradiated with the laser beam.

4. The package sealing method according to any one of claim 1 or 2, wherein the case is provided with a through hole, and the case and the lid are fixed to each other by vacuum suction using the hole, and thereafter, the bonding member is irradiated with the laser beam.

5. The package sealing method according to claim 4, further comprising the steps of:

arranging a metal in the hole provided to the case, after welding the case and the lid together; and

irradiating the metal with a laser beam so that the metal is melted to seal the hole with the molten metal.

6. The package sealing method according to claim 5, wherein one laser beam used for welding the case and the lid has the same wavelength as another laser beam for irradiating the metal arranged in the hole of the case.

7. The package sealing method according to any one of claims 1 to 6, wherein the laser beam is scanned, to irradiate the bonding member point by point so that the case and the lid are welded together.

8. The package sealing method according to any one of claims 1 to 6, wherein the laser beam is projected through a phase hologram to generate a diffraction light pattern with which the bonding member is irradiated at a time as a whole, so that the case and the lid are welded together.

9. The package sealing method according to claim 8,

wherein light energy is reserved in the zero-th order diffracted beam from the phase hologram, and the diffraction light pattern is positioned by using the zero-th order diffracted beam.

10. The package sealing method according to claim 8 or 9, wherein the laser beam is converged by a condensing lens, the phase hologram is arranged between the condensing lens and the lid, and further, a position of the phase hologram is varied in an optical axis direction so that the diffraction light pattern can be obtained at a desired location with desired dimensions.

11. The package sealing method according to any one of claims 1 to 10, wherein a temperature distribution over a welding portion of the case and the lid is monitored during the laser irradiation of the bonding member.

12. The package sealing method according to any one of claims 1 to 11, wherein the bonding member is preheated before irradiated with the laser beam.

13. An electronic device module manufacturing method for sealing a case housing an electronic device, with a lid, comprising the following steps of:

interposing a bonding member between the case and

the lid; and

irradiating the bonding member with a laser beam through the lid so that the bonding member is melted to weld the case and the lid together with intervention of the bonding member.

14. (An) sealing apparatus for welding a case housing a product and a lid together with a bonding member, comprising:

fixing means for fixing the case and the lid; and

a laser beam irradiation apparatus for irradiating the bonding member with a laser beam through the lid.

15. The sealing apparatus according to claim 14, wherein the fixing means is a pressure apparatus.

16. The sealing apparatus according to claim 14, wherein the fixing means is a suction apparatus for sucking the lid to the case, using a hole provided to the case.

17. The sealing apparatus according to claim 16, which further includes a laser beam irradiation apparatus for melting a metal arranged in the hole provided to the case.

18. The sealing apparatus according to any one of claims 14 to 17, which further includes a laser scanner for scanning a laser beam to irradiate the bonding member point by point.

19. The sealing apparatus according to any one of claims 14 to 17, which further includes a phase hologram for forming a diffraction light pattern of the laser beam with which the bonding member is irradiated at a time as a whole.

20. The sealing apparatus according to any one of claims 14 to 19, which further includes a temperature monitor for monitoring a temperature distribution over a welding portion of the case and the lid during the laser irradiation of the bonding member.

21. The sealing apparatus according to any one of claims 14 to 20, which further includes a heater for preheating the bonding member.

22. A packaged product manufactured by the method according to any one of claims 1 to 13.